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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of:

Slaughter, et al.

Serial No. 09/653,614

Filed: August 31, 2000

For: Mechanism and Apparatus For URI-Addressable Repositories of Service Advertisements and Other Content in a Distributed Computing Environment

§ Group Art Unit: 2194
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CERTIFICATE OF MAILING
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APPEAL BRIEF

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir/Madam:

Further to the Notice of Appeal mailed March 1, 2005, Appellants present this Appeal Brief and respectfully request that it be considered by the Board of Patent Appeals and Interferences.

I. REAL PARTY IN INTEREST

As evidenced by the assignment recorded at Reel/Frame 011070/0159, the subject application is owned by Sun Microsystems, Inc., a corporation organized and existing under and by virtue of the laws of the State of Delaware, and now having its principal place of business at 4150 Network Circle, Santa Clara, CA 95054.

II. RELATED APPEALS AND INTERFERENCES

No other appeals, interferences or judicial proceedings are known which would be related to, directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

III. STATUS OF CLAIMS

Claims 1, 2, 4, 5, 7-14, 16-27, 29, 30 and 32-50 stand finally rejected. The rejection of claims 1, 2, 4, 5, 7-14, 16-27, 29, 30 and 32-50 is being appealed. A copy of claims 1, 2, 4, 5, 7-14, 16-27, 29, 30 and 32-50 is included in the Claims Appendix herein below.

IV. STATUS OF AMENDMENTS

No amendments to the claims have been submitted subsequent to the final rejection.

V. SUMMARY OF CLAIMED SUBJECT MATTER

Attempts at object storage in distributed computing systems are often language and operating system specific. For example, the Jini technology uses JavaSpaces as persistent object containers. JavaSpaces from Sun Microsystems, Inc., draws from the parallel processing work of David Gelernter, a computer science professor at Yale University. Gelernter's set of functions named "Linda" create a shared memory space called a TupleSpace, in which results of a computer's processes or the processes

themselves may be stored for access by multiple CPUs. Linda therefore provides a global shared memory for multiple processors.

Another technology that extends Linda is T Spaces from IBM Corporation. T Spaces extends the basic Linda TupleSpace framework with real data management and the ability to download new datatypes and new semantic functionality. T Spaces provides a set of network communication buffers and a set of APIs for accessing those buffers. Like many solutions, T Spaces uses a code-centric programming model and shares the drawbacks of such a model. Additionally, T Spaces is implemented in the Java programming language and therefore requires a Java Virtual Machine or other means of executing Java bytecode, such as a Java-capable microprocessor.

Applicants' claimed invention provides a different technique for addressable repositories in a distributed computing environment. Independent claim 1 is directed to a method including a client accessing a space service according to a schema for the space service. In the distributed computing environment, clients and services may interact and access shared content by relying upon "spaces" or object repositories providing a mechanism for interaction between client and services (*see, e.g.* page 13, lines 3-8; page 30, lines 8-24). As described on page 13 of the Specification, service providers may advertise services in a space and a space service may store and maintain service advertisements. Service advertisements may describe services and/or content provided by a corresponding service (*see, e.g.* FIG 8, page 13, lines 3-13; page 35, lines 4-17). A space may include a collection of advertisements. Spaces may be structured in various ways, such as having a flat, un-related set of advertisements or as a hierarchy of related advertisements. (*see, e.g.* page 15, lines 17-30; page 17, line 1-19).

Advertisements may include information usable to access services. An advertisement may provide a mechanism for addressing and accessing services and/or content with a distributed computing environment. For example, an advertisement may include a URI for a service and may include a message schema for accessing or invoking the service. For instance, an advertisement may include an XML schema defining a

client-server interface for accessing a service. (*see, e.g.* page 17, line 1-19; page 32, lines 19-27; page 33, lines 2-7)

The space service may also provide functions to manage or access the stored service advertisements. A space may itself be a service (i.e. a space service). A space service may have its own advertisement including information for accessing and invoking the space service just like any other service. Such functions may be invoked according to a schema, such as an XML schema, for the space service that may specify messages for invoking the functions provided by the space service. The schema may specify messages usable to read and publish advertisements with the space service (*see, e.g.* FIG. 8; page 15, lines 17-30; page 17, line 1-19; page 31, line 24 – page 32, line 4; page 33, lines 9-18; page 34, lines 14-28; page 35, lines 4-18).

The method of claim 1 also includes a client selecting one of the service advertisements and using information in the selected service advertisement to execute a service with which the advertisement is associated. The client may send messages specified in a schema for the space service to browse or search advertisements stored in the space. After selecting an advertisement for a desired service, the client may access the advertisement, such as by sending a message to the space service. The message may be specified in a message schema for the space service. The client may subsequently use information in the advertisement, such as a URI and message schema, to access and/or invoke the desired service (*see, e.g.* FIG. 22 and 31; page 18, lines 5-18; page 35, lines 4-18; page 48, line 28 – page 49, line 9).

Independent claim 14 is directed to system including a client, a service and a space service. (*see, e.g.* FIG. 6, 8, 9, 10A, 10B, 11A, 11B, 15, 18, 25; page 13, lines 3-8; page 30, lines 8-24). The space service of claim 14 provides the ability to publish and access service advertisements as described above regarding claim 1.

The service of claim 14 is able to send a message according to a schema for the space service to publish an advertisement with the space service. As described above

regarding claim 1, such an advertisement may include information usable to access the service, such as an URI and/or a message schema for accessing the service.

As described above regarding claim 1, the space service may store the service advertisement for the service and a client may communicate with the space service to select the service advertisement. The client may communicate with the space service according to a message schema for the space service. The client may also use the information from the service advertisement to execute the first service, as described above regarding claim 1.

Independent claim 26 is directed to a medium comprising program instructions that are computer-executable to implement the method as recited in claim 1 and described above. For a more detailed discussion regarding such a method, please refer to the description of claim 1 above.

Independent claim 39 is directed to a method including storing information in a space by sending messages to the space. As described above regarding claim 1, clients and services in a distributed computing environment may interact and access shared content by relying upon "spaces" or object repositories providing a mechanism for interaction between client and services. Spaces may store information, such as service advertisements or other content and clients may send messages to spaces in order to store information in a space (*see, e.g.* page 13, lines 3-8; page 30, lines 8-24). Such a space may be addressable at a Uniform Resource Identifier (URI) and a client may locate the space at the URI and retrieve the information stored in the space by sending messages specified in the schema for the space, as noted above regarding claim 1. Messages usable to access a space may be specified in a schema for the space that specifies messages usable to invoke functions of the space (*see, e.g.* page 17, line 1-19; page 32, lines 19-27; page 33, lines 2-7).

Independent claim 43 is directed to a system including a space, addressable at a URI and comprising a scheme specifying messages usable to invoke functions of the

space, to store information expressed in a data representation language and a client communicating with the space to retrieve the information from the space by sending messages specified in a schema for the space. As described above regarding claim 39, the schema may specify messages usable to invoke various functions of the space. Please refer to the discussion of claim 39 above for a more detailed discussion of such functionality.

Independent claim 47 is directed to a medium including program instructions that are computer-executable to implement the method as recited in independent claim 39. For a more detailed discussion regarding such a method, please refer to the description of claim 39 above.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

1. Claims 39-50 stand finally rejected under 35 U.S.C.§ 103(a) as being unpatentable over Pulliam et al. (U.S. Patent 6,609,108) (hereinafter "Pulliam").

2. Claims 1, 2, 4, 5, 7-14, 16-27, 29-30 and 32-38 stand finally rejected under 35 U.S.C.§ 103(a) as being unpatentable over Pulliam in view of Guyot et al. (U.S. Patent 6,119,098) (hereinafter "Guyot").

VII. ARGUMENT

First Ground of Rejection:

Claims 39-50 stand finally rejected under 35 U.S.C.§ 103(a) as being unpatentable over Pulliam et al. (U.S. Patent 6,609,108) (hereinafter "Pulliam"). Appellants traverse this rejection for at least the following reasons. Different groups of claims are addressed under their respective subheadings.

Claims 39 - 41:

Contrary to the Examiner's assertion, Pulliam fails to teach or suggest storing a set of information in a space by sending at least one message specified in a schema for the space, wherein the schema specifies a plurality of messages usable to invoke functions of the space, wherein the set of information is expressed in a data representation language, and wherein the space is addressable at a Uniform Resource Identifier (URI). Pulliam teaches an online shopping communication schema for communicating online shopping orders such as vehicle orders wherein "a consumer is provided real-time information, prior to the placement of an order or purchase by the consumer, regarding the availability and status of a configured product in relation to the product's manufacturing and delivery process or 'pipeline'." (Pulliam, column 2, lines 55-62). However, the teachings of Pulliam clearly do not suggest storing a set of information in a space by sending at least one message specified in a schema for the space.

The Examiner cites column 3, lines 52-67, where Pulliam describes the content of Pulliam's order message for his online ordering system. The order message sends detailed vehicle configuration information for ordering. However, Pulliam's order message is used to place an online order, not to store a set of information in a space.

The Examiner also cites column 7, lines 46-54, where Pulliam describes web page retrieval and presentation over the Internet using various technologies including, HTML, XML, ASP, Java Applets, etc., and further cites column 13, lines 19-67 that teaches how a client or presentation application may submit search requests to find vehicles that match search criteria. None of the Examiner's cited passages, nor any other portion of Pulliam, has anything to do with storing a set of information in a space by sending at least one message specified in a schema for the space. Instead, Pulliam teaches a schema for online purchasing messages (e.g. messages to purchase a vehicle online).

In response to above argument, the Examiner, in the Advisory Action, responds by again citing column 3, lines 52-67 of Pulliam. However, as noted above, the cited passage does not teach storing a set of information in a space by sending at least one

message specified in a schema usable to invoke functions of the space. The Examiner equates "a region in an online system for storing the vehicle information" with a space. However, Pulliam does not teach sending a message, specified in a schema, to store vehicle information in a region of an online ordering system. Instead, as noted above, Pulliam teaches messages for ordering vehicles. Pulliam does not describe his order message as storing vehicle information. Instead, Pulliam teaches that his order message includes vehicle search criteria that is used to locate desired vehicle listings in inventory databases. Pulliam does not teach that vehicle information is stored by sending messages specified in a schema. Instead, Pulliam just states that inventory database 322 and configuration and pricing database 324 may be searched for desired vehicles, but does not describe storing vehicle information to these database by sending messages specified in schema that specifies a plurality of messages usable to invoke functions of a space.

Further in regard to claim 39, Pulliam fails to teach or suggest wherein the set of information stored in the space by sending the specified message is expressed in a data representation language. At the Examiner's cited passage (Pulliam, column 7, line 46-column 8, lines 5), Pulliam describes basic and standard web page retrieval and presentation over the Internet using various technologies including, HTML, XML, ASP, Java Applets, etc. However, Pulliam does not teach that these web pages are stored in a space by sending at least one message specified in a schema for the space. Pulliam specifically refers to consumers being able to enter and send information to servers and how such web pages serve as a multimedia user interface that interfaces between the users and the system. While the cited passage does mention that "[w]eb pages can be ... created using ... extensible markup language (XML)", *Pulliam does not teach or suggest that its web pages are stored in a space by sending at least one message specified in a schema for the space.* Pulliam clearly does not teach or suggest a set of information expressed in a data representation language that is stored in a space by sending a message specified in a schema for the space.

In response to Appellants' argument above regarding Pulliam's failure to teach or suggest storing a set of information expressed in a data representation language in a space

by sending a message specified in a schema for the space, the Examiner, in the "Response to Arguments" section of the Final Action, merely cites again the same portions (column 7, line 46 – column 8, line 5) of Pulliam cited in the rejection of claim 39, without providing any further rebuttal or argument. **Thus, the Examiner has not provided any argument refuting Appellants' argument above.**

Additionally, Pulliam does not teach or suggest a schema specifying a plurality of messages usable to invoke functions of the space. On p. 3 of the Final Action, the Examiner admits that Pulliam fails to teach that the schema specifies a plurality of messages usable to invoke functions of the space, but notes that Pulliam does teach an online communication schema for communicating vehicle orders and cites column 3, lines 29-39 of Pulliam. However, Pulliam's schema does not specify a plurality of messages usable to invoke functions of the space. In contrast, Pulliam teaches that a customer "submits a new order 1200 to a web site 602, which is constructed as an interface between the vehicle manufacturer and the customers." (Pulliam, column 19, lines 37-40). Thus, Pulliam is clearly not teaching a schema that specifies a plurality of messages usable to invoke functions of a space, as the Examiner contends, but instead is teaching messages that make up an interface for vehicle manufacturers to receive orders from customers. Appellants fail to see the relevance of the Examiner's reference regarding Pulliam's online vehicle ordering communication messages to a *schema specifying a plurality of messages usable to invoke functions of the space*. The messages in Pulliam simply include information about a vehicle order. Pulliam does not describe his messages as invoking any functions.

In the Advisory Action, the Examiner repeats his contention that Pulliam's teachings regarding a communication schema including a customer request message, which includes an order message suggests a schema specifying a plurality of messages usable to invoke functions of a space and again cites column 3, lines 29-39 of Pulliam. Thus, the Examiner does not provide any additional argument or rebuttal to Appellant's arguments that it would not be obvious to modify Pulliam to include a schema for the space that specifies a plurality of messages usable to invoke functions of the space. The

Examiner merely states he is applying a broad interpretation to the claim. **However, it is improper for the Examiner to ignore the specific wording of the claim.** Even under the broadest interpretation, Pulliam clearly does not teach or suggest a schema specifying a plurality of messages usable to invoke functions of the space.

Further, Appellants disagree with the Examiner's assertions that it would have been obvious to modify the teaching of Pulliam to include a schema that specifies a plurality of messages usable to invoke functions of the space "in order to provide a means for efficiently delivering the desired service to the customer, and minimizing the risk that the customer will become inconvenienced and dissatisfied with the merchant's on-line ordering services." Pulliam describes a very detailed system for providing online vehicle ordering capabilities and does not suggest any need or benefit to storing a set of information in a space by sending at least one messages specified in a schema for the space, wherein the schema specifies a plurality of messages usable to invoke functions of the space. In fact, Appellants can find no reference in Pulliam teaching or suggesting any benefit to modifying Pulliam that would result in a method comprising storing a set of information in a space by sending at least one messages specified in a schema for the space, wherein the schema specifies a plurality of messages usable to invoke functions of the space, as the Examiner contends. Thus, the Examiner's proposed modification of Pulliam is clearly based solely on hindsight reasoning. No efficiencies or risk minimization would be achieved in Pulliam's system by storing a set of information in a space by sending message specified in a schema that specifies a plurality of messages usable to invoke functions of a space. Additionally, the Examiner's stated motivation for modifying Pulliam is merely a repetition of the purported benefits of Pulliam's system. Specifically, Pulliam states that the "availability of status and tracking information ... can therefore be used to minimize the risk that the customer will become inconvenienced and dissatisfied with the merchant's on-line ordering services" (Pulliam, column 2, lines 48-52). Thus, rather than providing motivation to modify Pulliam to include a schema specifying a plurality of messages usable to invoke functions of a space, the Examiner's stated motivation is actually provided by Pulliam's invention. The reasons the Examiner gives to modify Pulliam's teachings are not commensurate with the modifications that the

Examiner is attempting to make. The Examiner is clearly relying upon hindsight analysis to arrive at such a conclusion.

Furthermore, Pulliam fails to teach the client retrieving the set of information expressed in the data representation language from the space by sending at least one of the messages specified in the schema for the space. The Examiner cites passages in Pulliam (column 3, line 52 – column 4, line 10, column 13, lines 19-67, and column 16, lines 6-12) that describe the use of XML messages for vehicle orders, vehicle order confirmations, and for available vehicle searches. However, receiving order confirmation messages and search results is the same as not retrieving a set of information expressed in a data representation language from a space by sending a message specified in a schema for the space. Following the Examiner's line of argument, the data included in an order confirmation (or in a search results message) would have to have been stored by sending at least on message specified in a schema for the space. In other words, again following the Examiner's argument, a client in Pulliam would have to locate and retrieve information (from an order message) saved in a space by sending a message specified in a schema that specifies messages usable to invoke functions of the space. However, a client in Pulliam does not retrieve any information that was stored in Pulliam's system by sending a message specified in a schema specifying messages usable to invoke functions of the system. Instead, a client in Pulliam's system receives results from a search. Pulliam teaches that information (for orders or searches) is retrieved from inventory database 322 and that inventory importer 328 "is responsible for obtaining the relevant data from one or more sources, reformatting the data as necessary, and storing the data in the inventory database 322." (Pulliam, column 8, lines 25-44). In other words, the data returned as search results and order confirmations is retrieved from an inventory database built by an inventory importer using information gathered from various sources – and therefore not stored by sending a message specified in a schema for the space. Thus, Pulliam fails to teach a client retrieving the set of information expressed in the data representation language from the space by sending at least one of the messages specified in the schema for the space.

In the Advisory Action, the Examiner responds to the above argument by again citing column 3, lines 52-67 and refers to Pulliam's sending of an XML confirmation message in response to processing an order message. However, as noted above, Pulliam's confirmation message does not retrieve any information that was stored in the space by sending a message specified in a schema specifying messages usable to invoke functions of the space. **Thus, the Examiner has not provided any argument refuting Appellants' argument above.**

Claim 42:

Regarding claim 42, contrary to the Examiner's assertion, Pulliam fails to teach wherein the schema is expressed in the data representation language. In contrast, at the Examiner's cited passage (column 7, lines 46-61), Pulliam describes basic and standard web page retrieval and presentation over the Internet using various technologies including, HTML, XML, ASP, Java Applets, etc. Pulliam specifically refers to consumers being able to enter and send information to servers and how such web pages serve as a multimedia user interface that interfaces between the users and the system. Pulliam teaches that XML is used to describe the content of messages, not to specify the messages themselves. Appellants can find not teaching anywhere in Pulliam regarding wherein a schema is expressed in a data representation language. **Appellants note that the Examiner has never provided any rebuttal of this argument.**

Claims 43-45:

The Examiner rejects claim 43 for the same reasons as claim 39. However, Pulliam fails to teach or suggest a space comprising a schema which specifies one or more messages usable to invoke functions of the space. The Examiner admits that Pulliam fails to teach that the schema specifies a plurality of messages usable to invoke functions of the space, but notes that Pulliam does teach an online communication schema for communicating vehicle orders and cites column 3, lines 29-39 of Pulliam. However, as noted above regarding claim 39, Pulliam's schema does not specify a plurality of messages usable to invoke functions of the space.

Furthermore, as discussed above in regard to claim 39, Pulliam fails to teach or suggest a client that is operable to retrieve a set of information expressed in the data representation language from the space by sending at least one of the messages specified in the schema for the space.

For a more detailed discussion regarding Pulliam's failure to teach or suggest the limitations of claim 43, please refer to Appellants' arguments above regarding claim 39.

Claim 46:

Regarding claim 46, contrary to the Examiner's assertion, Pulliam fails to teach wherein the schema is expressed in the data representation language. In contrast, as noted above regarding claim 42, the Examiner's cited passage (Pulliam, column 7, lines 46-61) describes basic and standard web page retrieval and presentation over the Internet using various technologies including, HTML, XML, ASP, Java Applets, etc. Pulliam specifically refers to consumers being able to enter and send information to servers and how such web pages serve as a multimedia user interface that interfaces between the users and the system. Pulliam teaches that XML is used to describe the content of messages, not to specify the messages themselves. Appellants can find not teaching anywhere in Pulliam regarding wherein a schema is expressed in a data representation language. **Appellants note that the Examiner has never provided any rebuttal of this argument.**

Claim 47-49:

Regarding claim 47, Pulliam fails to teach or suggest storing a set of information in a space by sending at least one message specified in a schema for the space. Pulliam teaches an online shopping communication schema for communicating online shopping orders such as vehicle orders wherein "a consumer is provided real-time information, prior to the placement of an order or purchase by the consumer, regarding the availability and status of a configured product in relation to the product's manufacturing and delivery

process or 'pipeline'." (Pulliam, column 2, lines 55-62). However, Pulliam teaches nothing regarding storing a set of information in a space by sending at least one message specified in a schema for the space. For a more detailed discussion of Pulliam's failure to teach storing a set of information in a space by sending at least one message specified in a schema for the space, please refer to Appellants' arguments regarding of claim 39 above, as they also apply to claim 47.

Pulliam also fails to teach or suggest wherein the set of information stored in the space by sending the specified message is expressed in a data representation language. At the Examiner's cited passage (Pulliam, column 7, line 46-column 8, lines 5), Pulliam describes basic and standard web page retrieval and presentation over the Internet using various technologies including, HTML, XML, ASP, Java Applets, etc. However, Pulliam does not teach that these web pages are stored in a space by sending at least one message specified in a schema for the space. Pulliam specifically refers to consumers being able to enter and send information to servers and how such web pages serve as a multimedia user interface that interfaces between the users and the system. While the cited passage does mention that "[w]eb pages can be ... created using ... extensible markup language (XML)", Pulliam does not teach or suggest that its web pages are stored in a space by sending at least one message specified in a schema for the space. Pulliam clearly does not teach or suggest a set of information expressed in a data representation language that is stored in a space by sending a message specified in a schema for the space. For a more detailed discussion of Pulliam's failure to teach wherein the set of information stored in the space by sending the specified message is expressed in a data representation language, please refer to Appellants' arguments regarding of claim 39 above, as they also apply to claim 47.

Pulliam further fails to teach or suggest the client retrieving the set of information expressed in the data representation language from the space by sending at least one of the messages specified in the schema for the space. The Examiner cites passages in Pulliam (column 3, line 52 – column 4, line 10, column 13, lines 19-67, and column 16, lines 6-12) that describe the use of XML messages for vehicle orders, vehicle order

confirmations, and for available vehicle searches. However, receiving order confirmation messages and search results is the same as not retrieving a set of information expressed in a data representation language from a space by sending a message specified in a schema for the space. For a more detailed discussion of Pulliam's failure to teach the client retrieving the set of information expressed in the data representation language from the space by sending at least one of the messages specified in the schema for the space, please refer to Appellants' arguments regarding of claim 39 above, as they also apply to claim 47.

Claim 50:

Regarding claim 50, contrary to the Examiner's assertion, Pulliam fails to teach wherein the schema is expressed in the data representation language. In contrast, as noted above regarding claim 42, the Examiner's cited passage (Pulliam, column 7, lines 46-61) describes basic and standard web page retrieval and presentation over the Internet using various technologies including, HTML, XML, ASP, Java Applets, etc. Pulliam specifically refers to consumers being able to enter and send information to servers and how such web pages serve as a multimedia user interface that interfaces between the users and the system. Pulliam teaches that XML is used to describe the content of messages, not to specify the messages themselves. Appellants can find not teaching anywhere in Pulliam regarding wherein a schema is expressed in a data representation language. **Appellants note that the Examiner has never provided any rebuttal of this argument.**

Second Ground of Rejection:

Claims 1, 2, 4, 5, 7-14, 16-27, 29-30 and 32-38 stand finally rejected under 35 U.S.C.§ 103(a) as being unpatentable over Pulliam in view of Guyot et al. (U.S. Patent 6,119,098) (hereinafter "Guyot"). Appellants traverse this rejection for at least the following reasons. Different groups of claims are addressed under their respective subheadings.

Claims 1 and 2:

In regard to claim 1, Pulliam in view of Guyot fails to teach or suggest a space service that is operable to store one or more service advertisements where each of the service advertisements comprises information which is usable to access a corresponding service. The Examiner admits that Pulliam fails to teach or suggest this limitation and relies on Guyot. However, Pulliam in combination with Guyot clearly fails to teach or suggest a space service that is operable to store one or more service advertisements and each of the service advertisements comprises information which is usable to access a corresponding service.

Guyot teaches a system for targeting and distributing commercial advertisements for marketing products over a distributed information network wherein a client application displays targeted consumer advertisements on a subscriber's computer. The commercial marketing advertisements in Guyot have nothing to do with service advertisements that comprise information usable by a client to execute corresponding services. In Guyot, a server manages the marketing advertisements that are specifically targeted to the subscriber based on a personal profile of the subscriber. The client application periodically accesses the server to download and display advertisements. The Examiner's cited passage (Guyot, column 3, line 23 – column 4, line 14) describes an advertisement database that "preferably includes Subscriber Data, Advertiser Data, Advertisement Data, Subscriber Statistics, and Client Application Software Data." (Guyot, column 3, lines 55-57). Thus, Guyot has nothing to do with a space that is operable to store one or more executable service advertisements, wherein each of the service advertisements comprises information which is usable to access a corresponding service. Hence, both Pulliam and Guyot, whether singly or in combination, fail to teach or suggest a space operable to store one or more service advertisements and each of the service advertisements comprises information which is usable to access a corresponding service.

Any combination of Pulliam and Guyot would merely result in the vehicle ordering system of Pulliam wherein the consumer targeted advertisements of Guyot would be displayed while a client is browsing or ordering vehicles. Such a combination (of Pulliam and Guyot) is clearly not relevant to Appellants' claimed invention and does not teach or suggest a space operable to store one or more service advertisements and each of the service advertisements comprises information which is usable to access a corresponding service.

Further regarding claim 1, Pulliam in view of Guyot does not teach or suggest a space service configured to provide functions to manage or access the one or more service advertisements in the space and wherein the functions of the space service are invoked according to the schema for the space service which specifies one or more messages for invoking functions of the space service. Instead, Pulliam describes a communication schema for an online ordering system that includes an order message used to send detailed vehicle configuration information for ordering. (Pulliam, column 3, lines 52-67). Guyot teaches several commands, such as TAKESTAT, SENDAD, and TAKEACT that a client application uses to interact with the commercial advertisement database. (Guyot, column 8, line 52 – column 9, line 17). Nowhere does Guyot describe these commands as functions to manage or access service advertisements in a space service, nor does Guyot describe these commands as being invoked according to a schema for the space service that specifies one or more message for invoking functions of the space service.

For additional discussion regarding Pulliam's failure to teach a schema specifying messages for invoking functions of a service, please refer to Appellants' arguments above regarding claim 39. As noted above, Guyot fails to overcome this shortcoming of Pulliam.

Additionally, Pulliam and Guyot do not teach or suggest a client using the information from the selected service advertisement to execute a corresponding service. Neither Pulliam nor Guyot is concerned with service advertisements including

information that a client may use to execute a corresponding service. Instead, as noted above, Pulliam teaches an online vehicle searching and ordering system and Guyot teaches a system that automatically displays customized commercial advertisements on a user desktop. Thus, neither system includes anything regarding a client using information from a selected service advertisement to execute a corresponding service.

Appellants note that the Examiner has never provided any rebuttal of Appellants' arguments above.

Claim 4:

Regarding claim 4, Pulliam and Guyot fail to teach or suggest that the schema is expressed in a data representation language. In contrast, Pulliam, at the Examiner's cited passage (column 7, lines 46-61), describes basic and standard web page retrieval and presentation over the Internet using various technologies including, HTML, XML, ASP, Java Applets, etc. Pulliam specifically refers to consumers being able to enter and send information to servers and how such web pages serve as a multimedia user interface that interfaces between the users and the system. Pulliam teaches that XML is used to describe the content of messages, not to specify the messages themselves. However, nowhere does Pulliam mention anything regarding expressing a message schema in a data representation language. Guyot fails to overcome Pulliam's deficiency in regard to a schema expressed in a data representation language. Guyot teaches the use of several commands, such as TAKESTAT, SENDAD, and TAKEACT, for the client application to interact with the advertisement database. (Guyot, column 8, line 52 – column 9, line 17). However, nowhere does Guyot mention anything regarding a data representation language or any description whatsoever describe a schema expressed in a data representation language. Thus, both Pulliam and Guyot, singly and in combination, fail to teach or suggest a schema expressed in a data representation language. **Appellants note that the Examiner has never provided any rebuttal of this argument.**

Claim 5:

Regarding claim 5, in contrast to the Examiner's assertion, Pulliam in view of Guyot fails to teach or suggest wherein the schema is expressed in a data representation language, wherein the data representation language comprises eXtensible Markup Language (XML). The Examiner cites column 7, lines 46-48, column 13, lines 22-42, and column 16, lines 6-12 of Pulliam. However, none of the cited passages teach anything regarding *a schema* expressed in a data representation language, wherein the data representation language comprises eXtensible Markup Language (XML). Instead, the first cited passage discusses how web pages may be XML documents. However, web pages are not schemas specifying messages usable to invoke functions of a space. The second and third passages describe how XML may be used to describe search criteria, search request and search response messages. Like web pages, search criteria, and search request and response messages have nothing to do with a message schema expressed in a data representation language comprising XML. Thus, Pulliam does not teach any sort of message schema expressed in a data representation language, wherein the data representation language comprises XML. Guyot also fails to teach or suggest a schema expressed in a data representation language comprising XML. In fact, Guyot fails to mention either XML or any data representation language at all and thus fails to overcome Pulliam's lack of teaching or suggestion regarding such a message schema expressed in a data representation language comprising XML. **Appellants note that the Examiner has never provided any rebuttal of this argument.**

Claim 7:

Regarding claim 7, Pulliam in view of Guyot fails to teach or suggest wherein the client accessing the space service comprises the client sending at least one of the messages specified in the schema to the space service. Pulliam teaches an online shopping communication schema for online shopping orders such as vehicle orders wherein "a consumer is provided real-time information, prior to the placement of an order or purchase by the consumer, regarding the availability and status of a configured product in relation to the product's manufacturing and delivery process or 'pipeline'." (Pulliam, column 2, lines 55-62). However, Pulliam teaches nothing regarding storing a set of

information in a space by sending at least one message specified in a schema for the space.

The Examiner cites column 3, lines 52-67, where Pulliam describes an order message for Pulliam's communication schema for an online ordering system. The order message is used to send detailed vehicle configuration information for ordering. Pulliam's order message is used to place an online order, not to store a set of information in a space. The Examiner also cites column 7, lines 46-54, where Pulliam describes web page retrieval and presentation over the Internet using various technologies including, HTML, XML, ASP, Java Applets, etc., and further cites column 13, lines 19-67 that teaches how a client or presentation application may submit search requests to find vehicles that match search criteria. None of the Examiner's cited passages nor any other portion of Pulliam teaches storing a set of information in a space by sending at least one message specified in a schema for the space. Instead, Pulliam teaches a schema for online purchasing messages (e.g. message to purchase a vehicle online).

Claim 8:

Regarding claim 8, Pulliam in view of Guyot fails to teach or suggest the client searching the one or more service advertisements stored in the space. Pulliam, at the Examiner's cited reference (column 13, lines 20-42) describes how applications may submit search requests "to find vehicles in-process and at dealerships which match ... the search criteria" and how such a search may include the use of pull-down lists of make or model of a available vehicles. Thus, contrary to the Examiner's contention, Pulliam does not teach a client searching service advertisements stored in a space, but rather client applications searching for available vehicles from an "inventory database 612" (Pulliam, column 13, lines 58 – 61).

The Examiner seems to be confusing "services" and "service advertisements." For instance, the Examiner refers to "a client searching the one or more services stored in the space". The Examiner then states that Pulliam is silent on "the services are the

service advertisements". Claim 8 does not recited anything about a client searching *services*. Claim 8 recites, in part, the client searching the one or more service advertisements stored in a space. Services are not service advertisements. Claim 8, dependent upon claim 1, recites that service advertisements comprise information usable to access *a corresponding service*.

The Examiner relies upon Guyot to teach "one or more service advertisements." However, Guyot also fails to teach or suggest a client searching the one or more service advertisements stored in the space. Instead, Guyot teaches a client application downloading and displaying specifically targeted consumer advertisements (Guyot, column 1, line 66 – column 2, line 6). Appellants disagree with the Examiner interpretation of Guyot and submit that Guyot, in fact, does not teach one or more *service* advertisements. The Examiner's cited passage (Guyot, column 3, line 23 – column 4, line 14) describes an advertisement database that preferably includes Subscriber Data, Advertiser Data, Advertisement Data, Subscriber Statistics, and Client Application Software Data.

The Examiner also agues that it would have been be obvious to combine the commercial advertisements of Guyot with the online ordering system of Pulliam. However, since, as noted above, Guyot only teaches commercial advertisement and does not teach or suggest service advertisements, the Examiner's proposed combination of Pulliam and Guyot would still fail to teach or suggest wherein the client access the space service comprises the client searching the one or more service advertisements stored in the space.

Furthermore, the Examiner has never provided any rebuttal of Appellants' arguments above.

Claim 9:

Regarding claim 9, Pulliam in view of Guyot fails to teach or suggest that each of the one or more service advertisements comprises a URI at which the corresponding service may be accessed and a schema which specifies messages usable to invoke functions of the corresponding service. The Examiner cites column 16, lines 4-12 of Pulliam. However, the Examiner's cited passage only refers to using XML within the body of HTTP messages for sending search request and search response messages. The cited passage does not mention service advertisements comprising URI's at which a corresponding service may be accessed.

The Examiner also argues, similar to the rejection of claim 8, that it would be obvious to combine the commercial advertisements of Guyot with the online ordering system of Pulliam. However, since, as noted above, Guyot only teaches commercial advertisement and does not teach or suggest service advertisements, the Examiner's proposed combination of Pulliam and Guyot still fails to teach or suggest wherein the client access the space service comprises the client searching the one or more service advertisements stored in the space.

Furthermore, as with the rejection of claim 8, discussed above, the Examiner seems to be confusing "services" and "service advertisements". Thus, the Examiner's argument that Pulliam teaches that "each of the one or more services comprise a URI ..." does not have anything to do with claim 9, which recites, in part, wherein each of the one or more service *advertisements* comprises a URI at which the corresponding service may be accessed."

The Examiner has never provided any rebuttal of Appellants' arguments above.

Claim 10:

Regarding claim 10, Pulliam in view of Guyot fails to teach or suggest that each of the one or more service advertisements comprises a schema which specifies messages

usable to invoke functions of the corresponding service, wherein each schema is expressed in a data representation language, as asserted by the Examiner. The Examiner rejects claim 10 for the same rationale as claim 4, discussed above, and thus Appellants' arguments above regarding claim 4 also apply to claim 10.

As noted above regarding the rejection of claim 4, Pulliam, at the Examiner's cited passage (column 7, lines 46-61), describes basic and standard web page retrieval and presentation over the Internet using various technologies including, HTML, XML, ASP, Java Applets, etc. Pulliam specifically refers to consumers being able to enter and send information to servers and how such web pages serve as a multimedia user interface that interfaces between the users and the system. Pulliam teaches that XML is used to describe the content of messages, not to specify the messages themselves. Appellants can find not teaching anywhere in Pulliam regarding wherein a schema is expressed in a data representation language.

Furthermore, Guyot also fails to teach or suggest wherein the schema is expressed in a data representation language. Guyot teaches the use of several commands, such as TAKESTAT, SENDAD, and TAKEACT commands for the client application to interact with the advertisement database. (Guyot, column 8, line 52 – column 9, line 17). However, nowhere does Guyot mention anything regarding a data representation language or any description whatsoever regarding the format of these messages.

Thus, both Pulliam and Guyot, whether singly or in combination, fail to teach or suggest any schema, whether for a space or other service, expressed in a data representation language. **The Examiner has never provided any rebuttal of Appellants' arguments above.**

Claim 11:

Regarding claim 11, contrary to the Examiner's contention, Pulliam in view of Guyot fails to teach or suggest that each schema is expressed in a data representation

language, wherein the data representation language comprises eXtensible Markup Language (XML). The Examiner rejected claim 11 for the same rationale as claim 5, discussed above, and thus Appellants' arguments above regarding claim 5 also apply to claim 11. The Examiner cites column 7, lines 46-48, column 13, lines 22-42, and column 16, lines 6-12 of Pulliam. However, none of the cited passages teach anything regarding a schema expressed in a data representation language, wherein the data representation language comprises eXtensible Markup Language (XML). Instead, the Examiner's cited passages discuss how web pages, search criteria, and search request and response messages may include XML. However, web pages, search criteria, and search request and response messages are not schemas specifying messages usable to invoke functions of a space. Thus, nowhere does Pulliam teach any sort of schema expressed in a data representation language, wherein the data representation language comprises XML.

As noted above regarding claim 5, Guyot also fails to teach or suggest a schema expressed in a data representation language comprising XML. In fact, Guyot fails to mention either XML or any data representation language at all and thus, fails to overcome Pulliam's lack of teaching or suggestion regarding such a schema. Thus, the Examiner's proposed combination of Pulliam and Guyot also fails to teach or suggest a schema expressed in a data representation language and wherein the data representation language comprises eXtensible Markup Language (XML). **Furthermore, the Examiner has never provided any rebuttal of Appellants' arguments above.**

Claim 12:

Regarding claim 12, contrary to the Examiner's contention, Pulliam in view of Guyot fails to teach or suggest generating results in response to the executing the corresponding service for the selected service advertisement for the client; and publishing the results in a network-addressable location, wherein information usable to access the network-addressable location is provided in an advertisement for the network-addressable-location.

The Examiner cites column 13, lines 20-67 and column 16, lines 4-12 of Pulliam that teach the use of search request and search response messages for a user to search for specific types of vehicles. However, Pulliam does not teach, in the cited passages or elsewhere, generating results in response to executing the corresponding service for a selected service advertisement. Firstly, a client in Pulliam's system does not search service advertisements to select a service to execute. The search results generated in response to a search request message do not correspond to results generated in response to executing a corresponding service for a selected service advertisement. Secondly, the search results cited by the Examiner are not published in a network-addressable location. Instead, Pulliam teaches that "[s]earch results are then returned to locate server 821 [that] generates a response message 865 containing a summary of the matched vehicles and sends it back to locate client 862." In other words, Pulliam teaches that search results are delivered to the requesting client, not stored in a network-addressable location. **Thus, Pulliam teaches the opposite of publishing the results in a network-addressable location.**

Additionally, Pulliam fails to teach or suggest wherein information usable to access the network-addressable location is provided in an advertisement for the network-addressable-location. Neither of the Examiner's cited passages mentions anything about an advertisement providing information usable to access Pulliam's search results. In fact, as noted above, Pulliam teaches that results are delivered to the requesting client, thereby obviating the need to publish the results in a network-addressable location.

The Examiner also cites column 3, line 23 through column 4, line 14 of Guyot that describes Guyot's commercial advertisements. However, as noted above, Guyot's commercial advertisements have nothing to do with service advertisements for executable services and Guyot's commercial advertisements do not include information usable to access such services. Furthermore, Guyot fails to describe his commercial advertisements as providing information usable to access a network-addressable location storing results generated by executing a service.

Thus, the Examiner proposed combination of Pulliam and Guyot fails to teach or suggest generating results in response to the executing the corresponding service for the selected service advertisement for the client; and publishing the results in a network-addressable location, wherein information usable to access the network-addressable location is provided in an advertisement for the network-addressable-location. **The Examiner has never provided any rebuttal of Appellants' arguments above.**

Claim 13:

Regarding claim 13, in contrast to the Examiner's assertion, Pulliam in view of Guyot fails to teach or suggest the client sending an instantiation request to the space after the selecting one or the service advertisements from the space, obtaining a lease for the corresponding service for the selected service advertisement, sending the lease and selected service advertisement to the client. The Examiner relies upon Guyot and cites FIGs. 6A and 6B, and associated texts (column 8, line 10 – column 9, line 36).

FIGs. 6A and 6B of Guyot illustrate the flow of communication between a subscriber system and the server. FIG 6A illustrates a client requesting and downloading the latest version of client software for Guyot's system. FIG 6B illustrates how a client application in Guyot's system uses the TAKESTAT, SENDAD and TAKEACK commands. However, none of these commands has anything to do with an instantiation request to a space service, obtaining a lease for a corresponding service, or sending the lease and the selected service advertisement to the client. Instead, Guyot's TAKESTAT command sends statistical information about the user's viewing of commercial advertisements. The SENDAD command is used to download another commercial advertisement for display on the user's computer, and the TAKEACK command is used to signal receipt of a commercial advertisement from the server. The method illustrated by FIGs 6A and 6B of Guyot does not teach or suggest anything about sending an instantiation request to a space service, obtaining a lease for a corresponding service, or sending the lease and the selected service advertisement to the client. Furthermore, the

only advertisements delivered to any client in Guyot's system are commercial advertisements and not service advertisements as recited by Appellants' claims.

Furthermore, Pulliam in view of Guyot fails to teach or suggest constructing a gate for the client to access the corresponding service. The Examiner has failed to cite any portion of either Pulliam or Guyot that teaches or suggests anything about constructing a gate for a client to access a service. Neither Pulliam's nor Guyot's system has any need to construct such a gate. Instead, Pulliam teaches the use of a traditional web browser, which does not construct gates to access services. Guyot teaches the use of a client application specifically for communicating with his server and thus has no need to construct a gate for the client to access a service.

The Examiner's proposed combination of Pulliam and Guyot fails to teach or suggest the client sending an instantiation request to the space after the selecting one or the service advertisements from the space, obtaining a lease for the corresponding service for the selected service advertisement, sending the lease and selected service advertisement to the client and also fails to teach or suggest constructing a gate for the client to access the corresponding service. **Once again, the Examiner has never provided any rebuttal of Appellants' arguments above.**

Claims 14 and 16:

Pulliam in view of Guyot fails to teach or suggest a service operable to send a message according to a schema for a space service to publish a service advertisement with the space service, wherein the service advertisement comprises information which is usable to access the first service. The Examiner rejects claim 14 for the same rationale as claim 1. As noted above regarding claim 1, The Examiner admits that Pulliam fails to teach or suggest this limitation and relies on Guyot. However, Guyot also fails to teach or suggest a space service that is operable to store one or more service advertisements and each of the service advertisements comprises information which is usable to access a corresponding service. For a more detailed discussion regarding Pulliam in view of

Guyot's failure to teach service operable to send a message according to a schema for a space service to publish a service advertisement with the space service, wherein the service advertisement comprises information which is usable to access the first service, please refer to Appellants' arguments above regarding claim 1 as they also apply to claim 14.

Additionally, Pulliam in view of Guyot fail to teach or suggest wherein the client is operable to communicate with the space service according to the message schema for the space service to access the space service and select the service advertisement from the space service, and wherein the client is further operable to use the information from the service advertisement to execute the first service. As noted above regarding claim 1, Pulliam and Guyot do not teach or suggest a client using the information from the selected service advertisement to execute a corresponding service. Neither Pulliam nor Guyot is concerned with service advertisements including information that a client may use to execute a corresponding service. For a more detailed discussion regarding this argument, please refer to Appellants' arguments above regarding claim 1.

Claim 17:

Regarding claim 17, Pulliam in view of Guyot fail to teach or suggest wherein the schema is expressed in a data representation language. Claim 17 is rejected for the same rationale as claim 4, and thus Appellants' arguments above regarding claim 4 also apply to claim 17.

Claim 18:

Regarding claim 18, Pulliam in view of Guyot fail to teach or suggest wherein the schema is expressed in a data representation language, wherein the data representation language comprises eXtensible Markup Language (XML). As claim 18 is rejected for the same rationale as claim 5, please see Appellants' arguments above regarding claim 5 as they also apply to claim 18.

Claim 19:

Regarding claim 19, in contrast to the Examiner's assertion, Pulliam in view of Guyot fails to teach or suggest wherein the schema specifies messages usable to read advertisements from the space service and publish advertisements in the space service. Instead, as discussed above, Pulliam teaches an online vehicle ordering system that includes messages for searching for and ordering vehicles. Pulliam, as admitted by the Examiner regarding claims 8, 9, and 12, does not teach service advertisements nor anything about reading or publishing service advertisements in a space service.

The Examiner also refers to the rejection of claim 9. However, claim 9 does not recite the same limitations recited in claim 19. **Thus, the Examiner has failed to provide a proper rejection of claim 19.** Furthermore, Guyot teaches a system to display commercial advertisements on a user's desktop. Guyot also fails to teach a schema specifying messages usable to read advertisements from the space service and publish advertisements in the space service. Therefore, any combination of Pulliam and Guyot would also fail to include such a schema. **The Examiner has never provided any rebuttal of Appellants' arguments above.**

Claim 20:

In regards to claim 20, Pulliam in view of Guyot fails to teach or suggest wherein the client is operable to search a plurality of advertisements stored in the space, as asserted by the Examiner. However, neither Pulliam nor Guyot mentions anything regarding service advertisements. As the Examiner relies upon the rejection of claim 8 for the rejection of claim 20, please see Appellants' arguments above regarding claim 8 for a detail discussion regarding how Pulliam in view of Guyot fails to teach or suggest wherein the client is operable to search a plurality of advertisements stored in the space.

Claim 21:

Pulliam in view of Guyot fails to teach or suggest wherein the service advertisement comprises a URI at which the first service may be accessed and a schema which specifies messages usable to invoke functions of the first service, as asserted by the Examiner. The Examiner cites column 16, lines 4-12 of Pulliam. However, the Examiner's cited passage only refers to using XML within the body of HTTP messages for sending search request and search response messages. The cited passage does not mention service advertisements comprising URI's at which a corresponding service may be accessed. As claim 21 is rejected for the same rationale as claim 9, Appellants' arguments above regarding claim 9 also apply to claim 21.

Claim 22:

Regarding claim 22, in contrast to the Examiner's assertion, Pulliam in view of Guyot fails to teach or suggest wherein the schema is expressed in a data representation language. As claim 22 is rejected for the same rationale as claim 10, please refer to Appellants' arguments above regarding claim 10 as they also apply to claim 21.

Claim 23:

Regarding claim 23, in contrast to the Examiner's assertion, Pulliam in view of Guyot fails to teach or suggest wherein the data representation language comprises eXtensible Markup Language (XML). As claim 23 is rejected for the same rationale as claim 11, please refer to Appellants' arguments above regarding claim 11 as they also apply to claim 23.

Claim 24:

Regarding claim 24, Pulliam in view of Guyot fails to teach or suggest wherein the first service is operable to generate results in response to the client accessing the first service using the service advertisement and further fails to teach or suggest wherein the space service is operable to store the results in a network-addressable location, wherein information usable to access the network-addressable location is provided in an

advertisement for the network addressable-location, as asserted by the Examiner. As claim 24 is rejected for the same rationale as claim 12, please refer to Appellants' arguments above regarding claim 12 as they also apply to claim 24.

Claim 25:

In regards to claim 25, Pulliam in view of Guyot fails to teach or suggest wherein the space service is operable to obtain a lease for the first service and send the lease and the service advertisement to the client and also fails to teach or suggest wherein the client is operable to construct a gate for the client to access the first service using the lease and the service advertisement sent by the space service, as asserted by the Examiner. As claim 25 is rejected for the same reasons as claim 13, Appellants' arguments above regarding claim 13 also apply to claim 25.

Claims 26 and 27:

In regard to claim 1, in contrast to the Examiner's assertion, Pulliam in view of Guyot fails to teach or suggest a space service that is operable to store one or more service advertisements where each of the service advertisements comprises information which is usable to access a corresponding service.

Furthermore, Pulliam in view of Guyot does not teach or suggest a space service configured to provide functions to manage or access the one or more service advertisements in the space and wherein the functions of the space service are invoked according to the schema for the space service which specifies one or more messages for invoking functions of the space service.

Additionally, Pulliam and Guyot do not teach or suggest a client using the information from the selected service advertisement to execute a corresponding service.

As claim 26 is rejected for the same rationale as claim 1, please refer to Appellants' arguments above regarding claim 1 as they also apply to claim 26.

Claim 29:

Regarding claim 29, Pulliam and Guyot fail to teach or suggest that the schema is expressed in a data representation language. As claim 29 is rejected for the same rationale as claim 4, please refer to Appellants' arguments above regarding claim 4 as they also apply to claim 29.

Claim 30:

Regarding claim 30, in contrast to the Examiner's assertion, Pulliam in view of Guyot fails to teach or suggest wherein the schema is expressed in a data representation language, wherein the data representation language comprises eXtensible Markup Language (XML). As claim 30 is rejected for the same rationale as claim 5, please refer to Appellants' arguments above regarding claim 5 as they also apply to claim 30.

Claim 32:

Regarding claim 32, Pulliam in view of Guyot fails to teach or suggest wherein the client accessing the space service comprises the client sending at least one of the messages specified in the schema to the space service. As claim 32 is rejected for the same rationale as claim 7, please refer to Appellants' arguments above regarding claim 7 as they also apply to claim 32.

Claim 33:

Regarding claim 33, Pulliam in view of Guyot fails to teach or suggest the client searching the one or more service advertisements stored in the space. Please refer to Appellants' arguments above regarding claim 8, as claim 33 is rejected for the same reasons as claim 8.

Claim 34:

Regarding claim 34, Pulliam in view of Guyot fails to teach or suggest that each of the one or more service advertisements comprises a URI at which the corresponding service may be accessed and a schema which specifies messages usable to invoke functions of the corresponding service. As claim 34 is rejected for the same rationale as claim 9, please refer to Appellants' arguments above regarding claim 9 as they also apply to claim 34.

Claim 35:

Regarding claim 35, Pulliam in view of Guyot fails to teach or suggest that each of the one or more service advertisements comprises a schema which specifies messages usable to invoke functions of the corresponding service, wherein each schema is expressed in a data representation language, as asserted by the Examiner. The Examiner rejects claim 35 for the same rationale as claim 10, discussed above, and thus Appellants' arguments above regarding claim 10 also apply to claim 35.

Claim 36:

Regarding claim 36, contrary to the Examiner's contention, Pulliam in view of Guyot fails to teach or suggest that the data representation language comprises eXtensible Markup Language (XML). As claim 36 is rejected for the same rationale as claim 11, please refer to Appellants' arguments above regarding claim 11 as they also apply to claim 36.

Claim 37:

Regarding claim 37, contrary to the Examiner's contention, Pulliam in view of Guyot fails to teach or suggest generating results in response to the executing the corresponding service for the selected service advertisement for the client; and publishing the results in a network-addressable location, wherein information usable to access the network-addressable location is provided in an advertisement for the network-

addressable-location. Additionally, Pulliam in view of Guyot fails to teach or suggest wherein information usable to access the network-addressable location is provided in an advertisement for the network-addressable-location. As claim 37 is rejected for the same rationale as claim 12, please refer to Appellants' arguments above regarding claim 12 as they also apply to claim 37.

Claim 38:

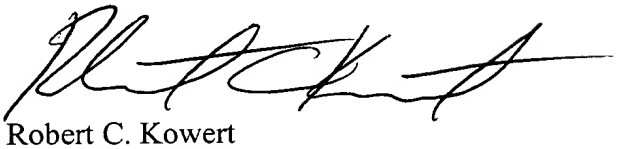
Regarding claim 38, in contrast to the Examiner's assertion, Pulliam in view of Guyot fails to teach or suggest the client sending an instantiation request to the space after the selecting one or the service advertisements from the space, obtaining a lease for the corresponding service for the selected service advertisement, sending the lease and selected service advertisement to the client. Please refer to Appellants' arguments above regarding claim 13, as claim 38 is rejected for the same reasons as claim 13.

VIII. CONCLUSION

For the foregoing reasons, it is submitted that the Examiner's rejection of claims 1, 2, 4, 5, 7-14, 16-27, 29, 30 and 32-50 was erroneous, and reversal of his decision is respectfully requested.

The Commissioner is authorized to charge the appeal brief fee of $500.00 and any other fees that may be due to Meyertons, Hood, Kivlin, Kowert, & Goetzel, P.C. Deposit Account No. 501505/5181-67400/RCK. This Appeal Brief is submitted with a return receipt postcard.

Respectfully submitted,



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IX. CLAIMS APPENDIX

The claims on appeal are as follows.

1. A method comprising:

a client accessing a space service according to a schema for the space service, wherein the space service is operable to store one or more service advertisements in a space, wherein each of the service advertisements comprises information which is usable to access a corresponding service, and wherein the space service is configured to provide functions to manage or access the one or more service advertisements in the space, wherein the functions of the space service are invoked according to the schema for the space service which specifies one or more messages for invoking functions of the space service, and wherein the schema specifies messages usable to read advertisements from the space and publish advertisements in the space;

the client selecting one of the service advertisements from the space; and

the client using the information from the selected service advertisement to execute the corresponding service.

2. The method of claim 1, wherein the client accessing the space service comprises the client sending messages to the space service at a Uniform Resource Identifier (URI).

4. The method of claim 1, wherein the schema is expressed in a data representation language.

5. The method of claim 4, wherein the data representation language comprises eXtensible Markup Language (XML).

7. The method of claim 1, wherein the client accessing the space service comprises the client sending at least one of the messages specified in the schema to the space service.

8. The method of claim 1, wherein the client accessing the space service comprises the client searching the one or more service advertisements stored in the space.

9. The method of claim 1, wherein each of the one or more service advertisements comprises a URI at which the corresponding service may be accessed and a schema which specifies messages usable to invoke functions of the corresponding service.

10. The method of claim 9, wherein each schema is expressed in a data representation language.

11. The method of claim 10, wherein the data representation language comprises eXtensible Markup Language (XML).

12. The method of claim 1, further comprising:

generating results in response to the executing the corresponding service for the selected service advertisement for the client; and

publishing the results in a network-addressable location, wherein information usable to access the network-addressable location is provided in an advertisement for the network addressable-location.

13. The method of claim 1, further comprising:

the client sending an instantiation request to the space after the selecting one of the service advertisements from the space;

obtaining a lease for the corresponding service for the selected service advertisement;

sending the lease and the selected service advertisement to the client; and

constructing a gate for the client to access the corresponding service.

14. A system comprising:

a client;

a first service; and

a space service which is communicatively coupled to the client and the first service;

wherein the first service is operable to send a message according to a schema for the space service to publish a service advertisement with the space service, wherein the service advertisement comprises information which is usable to access the first service;

wherein the space service is operable to store the service advertisement; and

wherein the client is operable to communicate with the space service according to the message schema for the space service to access the space service and select the service advertisement from the space service, and wherein the

client is further operable to use the information from the service advertisement to execute the first service.

16. The system of claim 14, wherein the client is operable to access the space service by sending the one or more messages to the space service at a URI.

17. The system of claim 14, wherein the schema is expressed in a data representation language.

18. The system of claim 17, wherein the data representation language comprises eXtensible Markup Language (XML).

19. The system of claim 14, wherein the schema specifies messages usable to read advertisements from the space service and publish advertisements in the space service.

20. The system of claim 14, wherein the client is operable to search a plurality of advertisements stored in the space.

21. The system of claim 14, wherein the service advertisement comprises a URI at which the first service may be accessed and a schema which specifies messages usable to invoke functions of the first service.

22. The system of claim 21, wherein the schema is expressed in a data representation language.

23. The system of claim 22, wherein the data representation language comprises eXtensible Markup Language (XML).

24. The system of claim 14,

wherein the first service is operable to generate results in response to the client accessing the first service using the service advertisement; and

wherein the space service is operable to store the results in a network-addressable location, wherein information usable to access the network-addressable location is provided in an advertisement for the network addressable-location.

25. The system of claim 14,

wherein the space service is operable to obtain a lease for the first service and send the lease and the service advertisement to the client; and

wherein the client is operable to construct a gate for the client to access the first service using the lease and the service advertisement sent by the space service.

26. A carrier medium comprising program instructions which are computer-executable to implement:

a client accessing a space service according to a schema for the space service, wherein the space service is operable to store one or more service advertisements in a space, wherein each of the service advertisements comprises information which is usable to access a corresponding service, and wherein the space service is configured to provide functions to manage or access the one or more service advertisements in the space, wherein the functions of the space service are invoked according to the schema for the space service which specifies one or more messages for invoking functions of the space service, and wherein the schema specifies messages usable to read advertisements from the space and publish advertisements in the space;

the client selecting one of the service advertisements from the space; and

the client using the information from the selected service advertisement to execute the corresponding service.

27. The carrier medium of claim 26, wherein in the client accessing the space service, the program instructions are further computer-executable to implement the client sending messages to the space service at a URI.

29. The carrier medium of claim 26, wherein the schema is expressed in a data representation language.

30. The carrier medium of claim 29, wherein the data representation language comprises eXtensible Markup Language (XML).

32. The carrier medium of claim 26, wherein in the client accessing the space service, the program instructions are further computer-executable to implement the client sending at least one of the messages specified in the schema to the space service.

33. The carrier medium of claim 26, wherein in the client accessing the space service, the program instructions are further computer-executable to implement the client searching the one or more service advertisements stored in the space.

34. The carrier medium of claim 26, wherein each of the one or more service advertisements comprises a URI at which the corresponding service may be accessed and a schema which specifies messages usable to invoke functions of the corresponding service.

35. The carrier medium of claim 34, wherein each schema is expressed in a data representation language.

36. The carrier medium of claim 35, wherein the data representation language comprises eXtensible Markup Language (XML).

37. The carrier medium of claim 26, wherein the program instructions are further computer-executable to implement:

generating results in response to the executing the corresponding service for the selected service advertisement for the client; and

publishing the results in a network-addressable location, wherein information usable to access the network-addressable location is provided in an advertisement for the network addressable-location.

38. The carrier medium of claim 26, wherein the program instructions are further computer-executable to implement:

the client sending an instantiation request to the space after the selecting one of the service advertisements from the space;

obtaining a lease for the corresponding service for the selected service advertisement;

sending the lease and the selected service advertisement to the client; and

constructing a gate for the client to access the corresponding service.

39. A method comprising:

storing a set of information in a space by sending at least one message specified in a schema for the space, wherein the schema specifies a plurality of

messages usable to invoke functions of the space, wherein the set of information is expressed in a data representation language, and wherein the space is addressable at a Uniform Resource Identifier (URI);

a client locating the space at the URI;

the client retrieving the set of information expressed in the data representation language from the space by sending at least one of the messages specified in the schema for the space.

40. The method of claim 39, wherein the data representation language comprises eXtensible Markup Language (XML).

41. The method of claim 39, wherein the space comprises one or more web pages which are viewable by a web browser.

42. The method of claim 39, wherein the schema is expressed in the data representation language.

43. A system comprising:

a space which is operable to store a set of information expressed in a data representation language, wherein the space is addressable at a Uniform Resource Identifier (URI), and wherein the space comprises a schema which specifies one or more messages usable to invoke functions of the space; and

a client which is communicatively coupled to the space, wherein the client is operable to:

locate the space at the URI; and

retrieve the set of information expressed in the data representation language from the space by sending at least one of the messages specified in the schema for the space.

44. The system of claim 43, wherein the data representation language comprises eXtensible Markup Language (XML).

45. The system of claim 43, further comprising:

a web browser which is operable to display web pages;

wherein the space comprises one or more web pages which are configured to be displayed by the web browser.

46. The system of claim 43, wherein the schema is expressed in the data representation language.

47. A carrier medium comprising program instructions which are computer-executable to implement:

storing a set of information in a space by sending at least one message specified in a schema for the space, wherein the schema specifies a plurality of messages usable to invoke functions of the space, wherein the set of information is expressed in a data representation language, and wherein the space is addressable at a Uniform Resource Identifier (URI);

a client locating the space at the URI;

the client retrieving the set of information expressed in the data representation language from the space by sending at least one of the messages specified in the schema for the space.

48. The carrier medium of claim 47, wherein the data representation language comprises eXtensible Markup Language (XML).

49. The carrier medium of claim 47, wherein the space comprises one or more web pages which are viewable by a web browser.

50. The carrier medium of claim 47, wherein the schema is expressed in the data representation language.

X. EVIDENCE APPENDIX

No evidence submitted under 37 CFR §§ 1.130, 1.131 or 1.132 or otherwise entered by the Examiner is relied upon in this appeal.

XI. RELATED PROCEEDINGS APPENDIX

There are no related proceedings.